

Amendments to the Specification:

1. On page 40, please replace the paragraph beginning at line 9 with the following paragraph:

Figure 9. Multiple overlapping peptides (SEQ ID NOs: 6-18) (MOP) from the cat allergen Fel d I. The three sequences within the box were insoluble in aqueous solution and as a result were excluded from the MOP preparation for clinical use.

2. On page 50, please replace the all of the text on page 50 with the following text:

Institutes of Health. The NCBI web site, from which access to the database may be sought, www.ncbi.nlm.nih.gov/. The allergens may be used as described above in order to identify MHC-restricted peptides capable of inducing LPR in individuals who possess a particular MHC molecule.

Allergen sequences and database accession numbers (NCBI Entrez accession numbers):

House dust mite

Dermatophagoides pteronyssinus

Der p 1 (SEQ ID NO: 19)

MKIVLAIASLLALSAVYARPSSIKTFEEYKKAFNKSyatFEDEEAAR
KNFLESVKYVQSNNGGAINHLSDSLDEFKNRFLMSAEAFEHLKTQF
DLNAETNACSINGNAPAEIDL RQMRTVTPIRMQGGCGSCWAFSGV
AATESAYLAYRNQSLDLAEQELVDCASQHGCHGDTIPRGIEYIQHN
GVVQESYYRYVAREQSCRRPNAQRFGISNYCQIYPPNVNKIREALA
QTHSAIAVIIGIKDLDAFRHYDGRTHIQRDNGYQPNYHAVNIVGYNS
AQGV DYWIVRNSWDTNWGDNGYGYFAANIDLMMIEEYPYVVIL

Der p 2 (SEQ ID NO: 20)

MMYKILCLSLVAAVARDQVDVKDCANHEIKKVLVPGCHGSEPCII
HRGKPFQLEAVFEANQNTKTAKIEIKASIDGLEVDVPGIDPNACHY
MKCPLVKGQQYDIKYTNV PKIAPKSENVVVTVKVMGDDGVLAC
AIATHAKIRD

Der p 3 (SEQ ID NO: 21)

MIIYNILIVLLLAINTLANPILPASPNATIVGGEKALAGECPYQISLQS
SSHFCGGTILDEYWILTAAHCVAGQ TASKLSIRYNSLKHSLGGEKIS

3. On page 51, please replace all of the text on page 51 with the following text:

VAKIFAHEKYDSYQIDNDIALIKLKSPMKLNQKNAKAVGLPAKGSD

VKVGDQVRVSGWGYLEEGSYSLPSELRRVDIAVVS RKECNELYSKA
NAEVTDNMICGGDVANGGKDSCQGDSSGGPVVDVKNNQVVGIVSW
GYGCARKGYPGVYTRVGNFIDWIESKRSQ

Der p 4 (SEQ ID NO: 22)

KYXNPFIGXRSVITXLME

Der p 5 (SEQ ID NO: 23)

MKFIIAFFVATLAVMTVSGEDKKHDYQNEFDLLMERIHEQIKKGE
LALFYLQEQINHFEKPTKEMKDKIVAEMDTIIAMIDGVRGVLDR
MQRKDLDFEQYNLEMAKKSGDILERDLKKEEARVKKIEV

Der p 6 (SEQ ID NO: 24)

AIGXQPAEAEAPFQISLMK

Der p 7 (SEQ ID NO: 25)

MMKLLLIAAAAFVAVSADPIHYDKITEEINKAVDEAVAAIEKSETFD
PMKVPDHSKFERHIGIIDLKGELDMRNIQVRGLKQMKRVGDANV
KSEDGVVKAHLLVGVHDDVVSMEYDLAYKLGDLPNTHVISDIQD
FVVELSLEVSEEGNMTLTSFEVRQFANVVNHIGGLSILDPIFAVLSD
VLTAIFQDTVRAEMTKVLAPAFKKELENNQ

Der p9 (SEQ ID NO: 26)

IVGGSNASPGDAVYQIAL

Dermatophagoides farinae

Der f 1 (SEQ ID NO: 27)

MKFVLAIASLLVLT VYARPASIKTFFFKAFNKNYATVEEEEVARK

4. On page 52, please replace all of the text on page 52 with the following text:

NFLESLKYVEANKGAINHLSLDEFKNRYLMSAEAFEQLKTQFD
LNAETSACRINSVNVPSELRLRSLRTVTPIRMQGGCGSCWAFSGVA
ATESAYLAYRNTSLDLSEQELVDCASQHGCHGDTIPRGIEYIQNG
VVEERSYPYVAREQRCRRPNSQHYGISNYCQIYPPDVKQIREALTQT
HTAIAVIIGIKDLRAFQHYDGRTHQHDNGYQPNYHAVNIVGYGSTQ
GDDYWIVRNSWDTTWGDSGYGYFQAGNNLMMIEQYPYVVM

Der f 2 (SEQ ID NO: 28)

MISKILCLSLLVAAVVADQVDVKDCANNEIKKVMVDGCHGSDPCII
HRGKPFTLEALFDANQNTKTAKIEIKASLDGLEIDVPGIDTNACHFM

KCPLVKGQQYDIKYTWNVPKIAPKSENVVTVKLIGDNGVLACAIA
THGKIRD

Der f 3 (SEQ ID NO: 29)

MMILTIVVLLAANILATPILPSSPNATIVGGVKAQAGDCPYQISLQSS
SHFCGGSILDEYWILTAAHCVNGQSAKKLSIRYNTLKHASGGEKIQV
AEIYQHENYDSMTIDNDVALIKLKTPMTLDQTNAPVPLPAQGS DV
KVGDKIRVSGWGYLQEGSYSLPSELQRVDIDVVSREQCDQLYSKAG
ADVSENMICGGDVANGGVDSCQGDSGGPVVDVATKQIVGIVSWG Y
GCARKGYPGVYTRVGNFVDWIESKRSQ

Der f 4 (SEQ ID NO: 30)

AVGGQDADLAEAPFQISLLK

Der f 7 (SEQ ID NO: 31)

MMKFLLIAAVAFVAVSADPIHYDKITEEINKAIDDAIAAIEQSETIDP
MKVPDHADKFERHVGIVDFK GELAMRNIEARGLKQMKRQGDANV
KGEEGIVKAHLLIGVHDDIVSMEYDLAYKLGD LHPTTHVISDIQDFV
VALSLEISDEGNITMTSFEVRQFANVVNHIGGLSILDPIFGVLS DVL
TAIFQD TVRKEMTKVLAPAFKRELEKN

5. On page 53, please replace all of the text on page 53 with the following text:

Additional mite allergen sequences (NCBI entrez accession):

1170095; 1359436; 2440053; 666007; 487661; 1545803; 84702; 84699;
625532; 404370; 1091577; 1460058; 7413; 9072; 387592.

Cat

Felis sequences

1082946 Fel dI chain 2 precursor – cat (SEQ ID NO: 32)

MRGALLVLALLVTQALGVKMAETCPIFYDVFFAVANGNELLLDLS
LTKVNATEPERTAMKKIQDCYVENGLISRVLDGLVMTTISSSKDCM
GEAVQNTVEDLKLNTLGR

1082945 Fel dI chain 1 short form – cat (SEQ ID NO: 33)

MLDAALPPCPTVAATADCEICPAVKRDVDLFLTGTPDEYVEQVAQ
YKALPVVLENARILKNCVDAKMTEEDKENALSLLDKIYTSPLC

1082944 Fel dI chain 1 long form precursor – cat (SEQ ID NO: 34)

MKGARVLVLLWAALLLIWGGNCEICPAVKRDVDLFLTGTPDEYVE
QVAQYKALPVVLENARILKNCVDAKMTEEDKENALSLLDKIYTSPL
C

Additional Felis sequences (NCBI entrez accession):

539716; 539715; 423193; 423192; 423191; 423190; 1364213; 1364212;
395407; 163827; 163823; 163825; 1169665; 232086; 1169666.

Latex

Hevea sequences:

6. On page 54, please replace all of the text on page 54 with the following text:

Hev b 1 (SEQ ID NO: 35)

MAEDEDNQGGQGEGLKYLGFVQDAATYAVTTFSNVYLFAKDKSG
PLQPGVDIIEGPVKNVAVPLYNRFSYIPNGALKFVDSTVVASVTIIDR
SLPPIVKDASIQVVSAIRAAPEAARSLASSLPGQTKILAKVIFYGEN

Hev b 3 (SEQ ID NO: 36)

MAEEVEEERLKYLDFVRAAGVYAVDSFSTLYLYAKDISGPLKPGV
DTIENVVKTVVTPVYYIPLEAVKFVDKTVDVSVTSLDGVVPPVIKQ
VSAQTYSVAQDAPRIVLDVASSVFNTGVQEGAKALYANLEPKAEQ
YAVITWRALNKLPLVPQVANVVVPTAVYFSEKYNDVVVRGTTEQGY
RVSSYLPLLPTEKITKVFGDEAS

Additional Hevea sequences (NCBI entrez accession):

3319923; 3319921; 3087805; 1493836; 1480457; 1223884; 3452147;
3451147; 1916805; 232267; 123335; 2501578; 3319662; 3288200;
1942537; 2392631; 2392630; 1421554; 1311006; 494093; 3183706; 3172534;
283243; 1170248; 1708278; 1706547; 464775; 266892;
231586; 123337; 116359; 123062; 2213877; 542013; 2144920; 1070656;
2129914; 2129913; 2129912; 100135; 82026; 1076559; 82028; 82027;
282933; 280399; 100138; 1086972; 108697; 1086976; 1086978;
1086978; 1086976; 1086974; 1086972; 913758; 913757; 913756;
234388; 1092500; 228691; 1177405; 18839; 18837; 18835; 18833;
18831; 1209317; 1184668; 168217; 168215; 168213; 168211; 168209;
348137.

Rye grass

Lolium sequences:

126385 Lol p 1 (SEQ ID NO: 37)

7. On page 55, please replace all of the text on page 55 with the following text:

MASSSSVLLVVALFAVFLGSAHGIKVPPGPNITA EYGDKWLD AKS
TWYGKPTGAGPKDNGGACGYKNVDKAPFNGMTGCGNTPIFKDGR
GCGSCFEIKCTKPESCSGEAVTVTITDDNEEPIAPYHFDLSGHAFGS
MAKKGEEQNVR SAGELELQFRRVKCKYPDDTKPTFHVEKASNP NY
LAILVKYVDGDGDVVAVDIKEKGKDKWIELKESWGAVWRIDTPDK
LTGPFTVRYTTEGGTKSEFEDVIPEGWKADTSYSAK

126386 Lol p 2a (SEQ ID NO: 38)

AAPVEFTVEKGSDEKNLALS IKYNKEGDSMAEVELKEHGSNEWLA
LKKNGDGVWEIKSDKPLKGPFNFRVSEKGM RNVFDDVVPADFKV
GTTYKPE

126387 Lol p 3 (SEQ ID NO: 39)

TKVDLTVEKGSDAKTLVLNIKYTRPGDTLAEVELRQH GSEEW EPM
TKKGNLWEVKS AKPLTGPMNFRFLSKGGMKNVFDEVIPTAFTVGK
TYTPEYN

2498581 Lol p 5a (SEQ ID NO: 40)

MAVQKYTV ALFLRRGPRGGPGRSYAADAGYTPAAAATPATPAATP
AGGWREGDDRRAEAAGGRQRLASRQPWPPLPTPLRRTSSRSSRPPS
PSPPRASSPTSAAKAPGLIPKLDTA YDVAYKAAEAHPRGQVRRLRH
CPHRSLRVIAGALEVHAVKPATEEVLA AKIPTGELQIVDKIDA AAFKI
AATAANAAPTNDKFTVFESAFNKALNECTGGAMRPTSSSPSRPRS
SRPTPPPSPAAPEVKYAVFEAALTKAITAMTQAQKAGKPAAAAATA
AATVATAAATAAAVLPPPLL VVQSLISLLIYY

2498582 Lol p 5b (SEQ ID NO: 41)

MAVQKHTVALFLAVALVAGPAASYAADAGYAPATPATPAAPATA
ATPATPATPATPAAVPSGKATTEEQKLIEKINAGFKAAVAAA AVVP
PADKYKTFVETFGTATNKAFVEGLASGYADQSKNQLTSKLDAALK

8. On page 56, please replace all of the text on page 56 with the following text:

LAYEAAQGATPEAKYDAYVATLTEALRVIAGTLEVHAVKPAAEEV
KVGAI PAAEVQLIDKVDAAYRTAATAANAAPANDKFTVFENTFNN

AIKVS LGAA YDSYKF IPTLVAAVKQAYAAKQATAPEVKYTVSETAL
KKAVTAMSEAEKEATPAAAATATPTPAAATATATPAAAYATATPA
AATATATPAAATATPAAAGGYKV

455288 Lol p isoform 9 (SEQ ID NO: 42)

MAVQKHTVALFLAVALVAGPAASYAADAGYAPATPATPAAPATA
ATPATPATPATPAAVPSGKATTEEQKLIEKINAGFKA AVAAA VVP
PADKYKTFVETFGTATNKAFVEGLASGYADQSKNQLTSKLDAALK
LAYEAAQGATPEAKYDAYVATLTEALRVIAGTLEVHAVKPAEEV
KVGAI PAEEVQLIDKVDAAYRTAATAANAAPANDKFTVFENTFNN
AIKVS LGAA YDSYKF IPTLVAAVKQAYAAKQATAPEVKYTVSETAL
KKAVTAMSEAEKEATPAAAATATPTPAAATATATPAAAYATATPA
AATATATPAAATATPAAAGGYKV

1582249 Lol p 11 (SEQ ID NO: 43)

DKGPGFVVTGRVYCDPCRAGFETNVSHNVEGATVAVDCRPFDDGG
ESKLKAEATTDKDGWYKIEIDQDHQEEICEVVLAKSPDKSCSEIEEF
RDRARVPLTSNXGIKQQGIRYANPIAFFRKEPLKECGGILQAY

Additional Lolium sequences (NCBI entrez accession):

135480; 417103; 687261; 687259; 1771355; 2388662; 631955; 542131;
542130; 542129; 100636; 626029; 542132; 320616; 320615; 320614;
100638; 100634; 82450; 626028; 100639; 283345; 542133; 1771353;
1763163; 1040877; 1040875; 250525; 551047; 515377; 510911; 939932;
439950; 2718; 168316; 168314; 485371; 2388664; 2832717; 2828273;
548867.

9. On page 57, please replace all of the text on page 57 with the following text:

Olive tree

Olive sequences

416610 Ole e 1 (SEQ ID NO: 44)

EDIPQPPVSQFHIQGQVYCDTCRAGFITELSEFIPGASLRLQCKDKEN

GDVTFTEVGYTRAEGLYSMLVE

RDHKNEFCEITLISSGRKDCNEIPTEGWAKPSLKFKLNTVNGTTRTV

NPLGFFKKEALPKCAQVYNKLG

YPPNM

Parietaria

Parietaria sequences:

2497750 Par j P2 (SEQ ID NO: 45)

MRTVSMAALVVIAAALAWTSSAEPAPAPAGGEEACGKVVQDIMPC
LHFVKGEEKEPSKECCSGTKKLSEEVKTTEQKREACKCIVRATKGIS
GIKNELVAEVPKKCDIKTTLPITADFDCSKIQSTIFRGYY

1352506 Par j P5 (SEQ ID NO: 46)

MVRALMPCLPFVQGKEKEPSKGCCSGAKRLDGETKTGPQRVHACE
CIQTAMKTYSDIDGKLVSEVPKHCGIVDSKLPPIDVNMDCKTVGVV
PRQPQLPVSLRHGPVTGPSDBAHKARLERPQIRVPPPAPEKA

1532056 Par j P8 (SEQ ID NO: 47)

MRTVSMAALVVIAAALAWTSSAELASAPAGGEGPCGKVHHIMPC
LKFVKGEEKEPSKSCCSGTKKLSEEVKTTEQKREACKCIVAATKGIS
GIKNELVAEVPKKCGITTTLPITADFDCSKIESTIFRGYY

1532058 Par j P9 (SEQ ID NO: 48)

MRTVSAPSAVALVVIVAAGLAWTSLASVAPPAPAGSEETCGTVVR

10. On page 58, please replace all of the text on page 58 with the following text:

ALMPCLPFVQGKEKEPSKGCCSGAKRLDGETKTGLQRVHACECIQT
AMKTYSDIDGKLVSEVPKHCGIVDSKLPPIDVNMDCKTLGVVPRQP
QLPVSLRHGPVTGPSDBAHKARLERPQIRVPPPAPEKA

2497749 Par j P9 (SEQ ID NO: 49)

MRTVSARSSVALVVIVA AVLVTSSASVAPPAPAGSEETCGTVVGA
LMPCLPFVQGKEKEPSKGCCSGAKRLDGETKTGPQRVHACECIQTA
MKTYSDIDGKLVSEVPKHCGIVDSKLPPIDVNMDCKTLGVLHYKG

N

1086003 Par j 1 (SEQ ID NO: 50)

MVRALMPCLPFVQGKEKEPSKGCCSGAKRLDGETKTGPQRVHACE
CIQTAMKTYSDIDGKLVSEVPKHCGIVDSKLPPIDVNMDCCTVGVV
PRQPQLPVSLRHGPVTGPSRSRPPTKHGWRDPRLEFRPPHRKKPNP
AFSTLG

Additional *Parietaria* sequences (NCBI entrez accession):

543659; 1836011; 1836010; 1311513; 1311512; 1311511; 1311510; 1311509;
240971.

Timothy grass

Phleum sequences:

Phl p 1 (SEQ ID NO: 51)

MASSSSVLLVVVLFVFLGSAYGIPKVPPGPNITATYGDKWLDACS
TWYGKPTGAGPKDNGGACGYKDVDKPPFSGMTGCGNTPIFKSGRG
CGSCFEIKCTKPEACSGEPVVVHITDDNEEPIAPYHFDLSGHAFGAM
AKKGDEQKLRSA GELELQFRRVKCKYPEGTKVTFHVEKGSNPNYL
ALLVKYVNGDGDVVAVDIKEKGKDKWIELKESWGAIWRIDTPDKL

11. On page 59, please replace all of the text on page 59 with the following text:

TGPFTVRYTTEGGTKTEAEDVIEGWKADTSYESK

Phl p 1 (SEQ ID NO: 52)

MASSSSVLLVVVLFVFLGSAHGIPKVPPGPNITATYGDKWLDACS
TWYGKPTAAGPKDNGGACGYKDVDKPPFSGMTGCGNTPIFKSGRG
CGSCFEIKCTKPEACSGEPVVVHITDDNEEPIAAYHFDLSGIAFGSM
AKKGDEQKLRSA GEVEIQFRRVKCKYPEGTKVTFHVEKGSNPNYL
ALLVKFSGDGDVVAVDIKEKGKDKWIALKESWGAIWRIDTPEVLK

GPFTVRYTTEGGTKARAKDVIPEGWKADTAYESK

Phlp 2 (SEQ ID NO: 53)

MSMASSSSSSLLAMAVLAALFAGAWCVPKVTFTVEKGSNEKHLAV
LVKYEGDTMAEVELREHGSDEWVAMTKGEGGVWTFDSEEPLQGP
FNFRFLTEKGMKNVFDDVPEKYTIGATYAPEE

Phl p 5 (SEQ ID NO: 54)

ADLGYGGPATPAAPAEAAPAGKATTEEQKLIEKINDGFKAALAAA
AGVPPADKYKTFVATFGAASNKAFAEGLSAEPKGAAESSSKAALTS
KLDAAAYKLAYKTAEGATPEAKYDAYVATLSEALRIIAGTLEVHAV
KPAAEEVKVIPAGELQVIEKVDSAFKVAATAANAAPANDKFTVFEA
AFNNAIKASTGGAYESYKFIPALEAAVKQAYAATVATAPEVKYTVF

12. On page 60, please replace all of the text on page 59 with the following text:

ETALKKAFTAMSEAQKAAKPATEATATATAAVGAATGAATAATG
GYKV

Phl p 5 (SEQ ID NO: 55)

ADLGYGGPATPAAPAEAAPAGKATTEEQKLIEKINDGFKAALAAA
AGVPPADKYKTFVATFGAASNKAFAEGLSAEPKGAAESSSKAALTS
KLDAAAYKLAYKTAEGATPEAKYDAYVATLSEALRIIAGTLEVHAV
KPAAEEVKVIPAGELQVIEKVDSAFKVAATAANAAPANDKFTVFEA
AFNNAIKASTGGAYESYKFIPALEAAVKQAYAATVATAPEVKYTVF
ETALKKAITAMSEAQKAAKPATEATATATAAVGAATGAATAATGG
YKV

Phl p 5b (SEQ ID NO: 56)

AAAAVPRRGPRGGPGRSYTADAGYAPATPAAAGAAAGKATTEEQ
KLIEDINVGFKA AVAAAASVPAADKFKTFEAAFTSSSKAAAAKAPG

LVPKLDAAYSVAYKAAVGATPEAKFDSFVASLTEALRVIAGALEV
HAVKPVTEEPGMAKIPAGELQIIDKIDAAFKVAATAAATAPADDDKF
TVFEAAFNKAIKESTGGAYDTYKCIPSLEAAVKQAYAATVAAAPQV
KYAVFEAALTKAITAMSEVQKVSQPATGAATVAAGAATTAAGAAS
GAATVAAGGYKV

Phl p 5a (SEQ ID NO: 57)

ADLGYPATPAAPAAGYTPATPAAPAGADAAGKATTEEQKLIEKIN
AGFKAALAGAGVQPADKYRTFVATFGPASNKAFAEGLSGEPKGAA
ESSSKAALTSKLDAAYKLAYKTAEGATPEAKYDAYVATLSEALRII
AGTLEVHAVKPAAEEVKVIPAGELQVIEKVDAAFKVAATAANAAP
ANDKFTVFEAAFNDEIKASTGGAYESYKFIPALEAAVKQAYAATVA
TAPEVKYTVFETALKKAITAMSEAQKAAKPAAAATATATAAVGAA
TGAATAATGGYKV

Phl p 5 (SEQ ID NO: 58)

MAVQKYTVLFLAVALVAGPAASYAADAGYAPATPAAAGAEAGK
ATTEEQKLIEDINVGFKAAVAAAASVPAADKFKTFEAAFTSSSKAA
TAKAPGLVPKLDAAYSVSYKAAVGATPEAKFDSFVASLTEALRVIA
GALEVHAVKPVTEEPGMAKIPAGELQIIDKIDAAFKVAATAAATAP
ADTVFEAAFNKAIKESTGGAYDTYKCIPSLEAAVKQAYAATVAAAP
QVKYAVFEAALTKAITAMSEVQKVSQPATGAATVAAGAATTAAG
AASGAATVAAGGYKV

13. On page 61, please replace all of the text on page 61 with the following text:

Phl p 5 (SEQ ID NO: 59)

MAVQKYTVLFLAVALVAGPAASYAADAGYAPATPAAAGAEAGK
ATTEEQKLIEDINVGFKAAVAAAASVPAADKFKTFEAAFTSSSKAA
TAKAPGLVPKLDAAYSVAYKAAVGATPEAKFDSFVASLTEALRVIA

GALEVHAVKPVTEDPAPWKIPAGELQIIDKIDAAFKVAATAAATAP
ADDKFTVFEEAFNKAIKESTGGAYDTYKCIPSLEAAVKQAYAATV
AAPQVKYAVFEAALTKAITAMSEVQKVSQPATGAATVAAGAATT
ATGAASGAATVAAGGYKV

Phl p 5 (SEQ ID NO: 60)

ADAGYAPATPAAAGAEAGKATTEEQKLIEDINVGFKAAVAAAASV
PAADKFKTFEAAFTSSSKAATAKAPGLVPKLDAAYSVAYKAAVGA
TPEAKFDSFVASLTEALRVIAGALEVHAVKPVTEEPGMAKIPAGEL
QIIDKIDAAFKVAATAAATAPADDKFTVFEEAFNKAIKESTGGAYD
TYKCIPSLEAAVKQAYAATVAAAPQVKYAVFEAALTKAITAMSEV
QKVSQPATGAATVAAGAATTAAGAASGAATVAAGGYKV

Phl p 5 (SEQ ID NO: 61)

SVKRSNGSAEVHRGAVPRRGPRGGPGRSYAADAGYAPATPAAAGA
EAGKATTEEQKLIEDINVGFKAAVAAAASVPAADKFKTFEAAFTSS
SKAATAKAPGLVPKLDAAYSVAYKAAVGATPEAKFDSFVASLTEA
LRVIAGALEVHAVKPVTEEPGMAKIPAGELQIIDKIDAAFKVAATAA
ATAPADDKFTVFEEAFNKAIKESTGGAYDTYKCIPSLEAAVKQAYA
ATVAAAPQVKYAVFEAALTKAITAMSEVQKVSQPATGAATVAAGA
ATTAAGAASGAATVAAGGYKV

Phl p 5 (SEQ ID NO: 62)

MAVHQYTVALFLAVALVAGPAGSYAADLGYGPATPAAPAAGYT
ATPAAPAGAEPAGKATTEEQKLIEKINAGFKAALAAAAGVPPADKY
RTFVATFGAASNKAFAEGLSGEPKGAAESSKAALTSKLDAAAYKLA

14. On page 62, please replace all of the text on page 62 with the following text:

YKTAEGATPEAKYDAYVATVSEALRIIAGTLEVHAVKPAAEEVKVI

PAGELQVIEKVDAAFKVAATAANAAPANDKFTVFEAAFNDAIKAS
TGGAYESYKFIPALEAAVKQAYAATVATAPEVKYTVFETALKKAIT
AMSEAQKAAKPAAAATATATAAVGAATGAATAATGGYKV

Phl p 5 (SEQ ID NO: 63)

ADLGYGGPATPAAPAEAAPAGKATTEEQKLIEKINDGFKAALAAA
AGVPPADKYKTFVATFGAASNKAFAEGLSAEPKGAAESSKAALTS
KLDAAYKLAYKTAEGATPEAKYDAYVATLSEALRIIAGTLEVHAV
KPAAEEVKVIPAGELQVIEKVDSAFKVAATAANAAPANDKFTVFEA
AFNNAIKASTGGAYESYKFIPALEAAVKQAYAATVATAPEVKYTVF
ETALKKAFTAMSEAQKAAKPATEATATATAAVGAATGAATAATG
GYKV

Phl p5b (SEQ ID NO: 64)

AAAAVPRRGPRGGPGRSYTADAGYAPATPAAAGAAAGKATTEEQ
KLIEDINVGFKAAVAAAASVPAADKFKTFEAAFTSSSKAAAAPG
LVPKLDAAYSVAYKAAVGATPEAKFDSFVASLTEALRVIAGALEV
HAVKPVTEEPGMAKIPAGELQIIDKIDAAFKVAATAAATAPADDKF
TVFEAAFNKAIKESTGGAYDTYKCIPSLEAAVKQAYAATVAAAPQV
KYAVFEAALTKAITAMSEVQKVSQPATGAATVAAGAATTAAGAAS
GAATVAAGGYKV

Phl p5a (SEQ ID NO: 65)

ADLGYPATPAAPAAGYTPATPAAPAGADAAGKATTEEQKLIEKIN
AGFKAALAGAGVQPADKYRTFVATFGPASNKFAEGLSGEPKGAA
ESSKAALTSKLDAAYKLAYKTAEGATPEAKYDAYVATLSEALRII
AGTLEVHAVKPAAEEVKVIPAGELQVIEKVDAAFKVAATAANAAP
ANDKFTVFEAAFNDEIKASTGGAYESYKFIPALEAAVKQAYAATVA

TAPEVKYTVFETALKKAITAMSEAQKAAKPAAAATATATAAVGAA

15. On page 63, please replace all of the text on page 63 with the following text:

TGAATAATGGYKV

Phl p 5 (SEQ ID NO: 66)

AVPRRGPRGGPGRSYAADAGYAPATPAAAGAEAGKATTEEQKLIE
DINVGFKAAVAAAASVPAGDKFKTFEAAFTSSSKAATAKAPGLVPK
LDAAYSVAYKAAVGATPEAKFDSFVASLTEALRVIAGALEVHAVK
PVTEEPGMAKIPAGELQIIDKIDAAFKVAATAAATAPADDKFTVFE
AAFNKAIKESTGGAYDTYK CIPSLEAAVKQAYAATVAAAPQVKYA
VFEAALTKAITAMSEVQKVSQPATGAATVAAGAATTATGAASGAA
TVAAGGYKV

Phl p 5b (SEQ ID NO: 67)

MAVPRRGPRGGPGRSYTADAGYAPATPAAAGAAAGKATTEEQKLI
EDINVGFKAAVAARQRPAADKFKTFEAA SPRHPRPLRQGAGLVPKL
DAAYSVAYKAAVGATPEAKFDSFVASLTEALRVIAGALEVHAVKP
VTEEPGMAKIPAGELQIIDKIDAAFKVAATAAATAPADDKFTVFEA
AFNKAIKESTGGAYDTYK CIPSLEAAVKQAYAATVAAAAEVKYAV
FEAALTKAITAMSEVQKVSQPATGAATVAAGAATTAAGAASGAAT
VAAGGYKV

Phl p 5 (SEQ ID NO: 68)

MAVHQYTVALFLAVALVAGPAASYAADLGYGPATPAAPAAGYTP
ATPAAPAEAAPAGKATTEEQKLIEKINAGFKAALAAAAGVQPADK
YRTFVATFGAASNKAFAEGLSGEPKGAAESSKAALTSKLDAAAYKL
AYKTAEGATPEAKYDAYVATLSEALRIIAGTLEVHAVKPAAEEVKV
IPAGELQVIEKVDAAFKVAATAANAAPANDKFTVFEAAFNDAIKAS

TGGAYESYKFIPALEAAVKQAYAATVATAPEVKYTVFETALKKAIT
AMSEAQKAAKPAAAATATATAAVGAATGAATAATGGYKV

Phl p 5 (SEQ ID NO: 69)

16. On page 64, please replace all of the text on page 64 with the following text:

EAPAGKATTEEQKLIKINAGFKAALARLQPADKYRTFVATFGPA
SNKAFAEGLSGEPKGAAESSKAALTSKLDAAAYKLAYKTAEGATPE
AKYDAYVATLSEALRIIAGTLEVHAVKPAAEEVKVIPAAELQVIEKV
DAAFKVAATAANAAPANDKFTVFEEAFNDEIKASTGGAYESYKFIP
ALEAAVKQAYAATVATAPEVKYTVFETALKKAITAMSEAQKAAKP
PPLPPPPQPPPLAATGAATAATGGYKV

Phl p 5 (SEQ ID NO: 70)

MAVHQYTVALFLAVALVAGPAASYAADLGYGPATPAAPAAGYTP
ATPAAPAEAAPAGKATTEEQKLIKINAGFKAALAAAAGVQPADK
YRTFVATFGAASNKAFAEGLSGEPKGAAESSKAALTSKLDAAAYKL
AYKTAEGATPEAKYDAYVATLSEALRIIAGTLEVHAVKPAAEEVKV
IPAGELQVIEKVDAAFKVAATAANAAPANDKFTVFEEAFNDAIKAS
TGGAYESYKFIPALEAAVKQAYAATVATAPEVKYTVFETALKKAIT
AMSEAQKAAKPAAAATATATAAVGAATGAATAATGGYKV

Phl p 5b (SEQ ID NO: 71)

MAVPRRGPRGGPGRSYTADAGYAPATPAAAGAAAGKATTEEQKLI
EDINVGFKAAVAARQRPAADKFKTFEASPRHPRPLRQGAGLVPKL
DAAYSVAYKAAVGATPEAKFDSFVASLTEALRVIAGALEVHAVKP
VTEEPGMAKIPAGELQIIDKIDAAFKVAATAAATAPADDKFTVFEEA
AFNKAIKESTGGAYDTYKCIPSLEAAVKQAYAATVAAAAEVKYAV
FEAALTKAITAMSEVQKVSQPATGAATVAAGAATTAAGAASGAAT

VAAGGYKV

Phl p 5a (SEQ ID NO: 72)

ADLGYGPATPAAPAAGYTPATPAAPAGADAAGKATTEEQKLIEKIN
AGFKAALAGAGVQPADKYRTFVATFGPASNKAF AEGLSGEPKGAA
ESSKAALTSKLDAAAYKLAYKTAEGATPEAKYDAYVATLSEALRII
AGTLEVHAVKPAAEEVKVIPAGELQVIEKVDAAFKVAATAANAAP

17. On page 65, please replace all the text on page 65 with the following text:

ANDKFTVFEEAFNDEIKASTGGAYESYKFIPALEAAVKQAYAATVA
TAPEVKYTVFETALKKAITAMSEAQKAAKPPPLPPPPQPPPLAATGA
ATAATGGYKV

Phl p 5 (SEQ ID NO: 73)

MAVHQYTVALFLAVALVAGPAASYAADLGYGPATPAAPAAGYTP
ATPAAPAEAAPAGKATTEEQKLIEKINAGFKAALAAAAGVQPADK
YRTFVATFGAASNKAFAEGLSGEPKGAAESSKAALTSKLDAAAYKL
AYKTAEGATPEAKYDAYVATLSEALRIIAGTLEVHAVKPAAEEVKV
IPAGELQVIEKVDAAFKVAATAANAAPANDKFTVFEEAFNDAIKAS
TGGAYESYKFIPALEAAVKQAYAATVATAPEVKYTVFETALKKAIT
AMSEAQKAAKPAATAATATAAVGAATGAATAATGGYKV

Phl p 6 (SEQ ID NO: 74)

MAAHKFMVAMFLAVAVVLGLATSPTAEGGKATTEEQKLIEDVNA
SFRAAMATTANVPPADKYKTFEAAFTVSSKRNLADAVSKAPQLVP
KLDEVYNAAYNAADHAAPEDKYEAFVLHFSEALRIIAGTPEVHAV
KPGA

Phl p 6 (SEQ ID NO: 75)

SKAPQLVPKLDEVYNAAYNAADHAAPEDKYEAFVLHFSEALHIIAG

TPEVHAVKPGA

Phl p 6 (SEQ ID NO: 76)

ADKYKTFEAAFTVSSKRNLADAVSKAPQLVPKLDEVYNAAYNAAD

HAAPEDKYEAFVLHFSEALHIIAGTPEVHAVKPGA

18. On page 66, please replace all of the text on page 66 with the following text:

Phl p 6 (SEQ ID NO: 77)

TEEQKLIEDVNASFRAAMATTANVPPADKYKTLEAAFTVSSKRNL

DAVSKAPQLVPKLDEVYNAAYNAADHAAPEDKYEAFVLHFSEALR

IIAGTPEVHAVKPGA

Phl p 6 (SEQ ID NO: 78)

MAAHKFMVAMFLAVAVVLGLATSPTAEGGKATTEEQKLIEDINAS

FRAAMATTANVPPADKYKTFEAAFTVSSKRNLADAVSKAPQLVPK

LDEVYNAAYNAADHAAPEDKYEAFVLHFSEALHIIAGTPEVHAVK

PGA

Phl p 6 (SEQ ID NO: 79)

MVAMFLAVAVVLGLATSPTAEGGKATTEEQKLIEDVNASFRAAMA

TTANVPPADKYKTFEAAFTVSSKRNLADAVSKAPQLVPKLDEVYN

AAYNAADHAAPEDKYEAFVLHFSEALRIIAGTPEVHAVKPGA

Phl p 7 (SEQ ID NO: 80)

MADDMERIFKRFDTNNGDGKISLSELTDALRTLGSTSADEVQRMMA

EIDTDGDGFIDFNEFISFCNANPGLMKDVAKVF

Phl p 11 (SEQ ID NO: 81)

MSWQTYVDEHLMCEIEGHHLASAAILGHDGTVWAQSADFPQFKPE

EITGIMKDFDEPGHLAPTGMFVAGAKYMVIQGEPRVIRGKKGAG

GITIKKTGQALVVGIIYDEPMTPGQCNMVVERLGDYLV EQGM

Additional Phleum sequences (NCBI entrez accession):

458878; 548863; 2529314; 2529308; 2415702; 2415700; 2415698;
542168; 542167; 626037; 542169; 541814; 542171; 253337; 253336;
453976; 439960 .

19. On page 67, please replace all of the text on page 67 with the following text:

Wasp (and related)

Vespula sequences:

465054 ALLERGEN VES V 5 (SEQ ID NO: 82)

MEISGLVYLIIIVTIIDLPYGKANNYCKIKCLKGGVHTACKYGSLKPN
CGNKVVVSYGLTKQEKQDILKEHNDFRQKIARGLETRGNPGPQPPA
KNMKNLVWNDELAYVAQVWANQCQYGHDTCRDVAKYQVGQNV
ALTGSTAAKYDDPVKLVKMWEDEVKDYNPKKKFSGNDFLKTGHY
TQMVBWANTKEVGCGSIKYIQEKWHKHLYVCNYGPSGNFMNEELY
QTK

1709545 ALLERGEN VES M 1 (SEQ ID NO: 83)

GPKCPFNSDTVSIHETRENRNRDLYTLQTLQNHPEFKKKKTITRPVVF
ITHGFTSSASEKNFINLAKALVDKDNMVISIDWQTAACNEYPGL
KYAYYPTAASNTRLVGQYIATITQKLVKDYKISMANIRLIGHSLGAH
VSGFAGKRVQELKLGKYSEIIGLDPARPSFDSNHCSERLCETDAEYV
QIIHTSNYLGTEKILGTVDGYMNGKNNPGCGRFFSEVCSHTRAVIY
MAECIKHECCLIGIPRSKSSQPISRCTKQECVCVGLNAKKYPSRGSFY
VPVESTAPFCNNKGKII

1352699 ALLERGEN VES V 1 (SEQ ID NO: 84)

MEENMNLKYLLLFFVYFVQVLNCCYGHGDPLSYELDRGPKCPFNSD
TVSIHETRENRNRDLYTLQTLQNHPEFKKKKTITRPVVFITHGFTSSAS

ETNFINLAKALVDKDNMVISIDWQTAACNEAAGLKYLYYPTAA
RNTRLVGQYIATITQKLVKHYKISMANIRLIGHSLGAHASGFAGKKV
QELKLGKYSEIIGLDPARPSFDSNHCSERLCETDAEYVQIIHTSNYLG
TEKTLGTVDFYMNNGKNQPGCGRFFSEVCSHSRAVIYMAECIKHE
CCLIGIPKSKSSQPISSCTKQECVCVGLNAKKYPSRGSFYVPVESTAP
FCNNKGKII

20. On page 68, please replace all of the text on page 68 with the following text:

1346323 ALLERGEN VES V 2 (SEQ ID NO: 85)

SERPKRVFNIYWNVPTFMCHQYDLYFDEVTFNFIKRNSKDDFQGD
KIAIFYDPGEFPALLSLKDGKYKKRNGGVPQEGNITIHLLQKFLENLD
KIYPNRNFSGIGVIDFERWRPIFRQNWGNMKIHKNFSLDLVRNEHPT
WNKKMIELEASKRFEKYARFFMEETLKLAKKTRKQADWGYYGYYP
YCFNMSPNNLVPECDVTAMHENDKMSWLFNNQNVLLPSVYVRQE
LTPDQRIGLVQGRVKEAVRISNNLKHSPKVLSYWWYVYQDETNTF
LTETDVKKTFQEIVINGGDGIIIWGSSSDVNSLSKCKRLQDYLLTVLG
PIAINVTEAVN

549194 ALLERGEN VES VI (SEQ ID NO: 86)

5KVNYCKIKCLKGGVHTACKYGTSTKPNCCKMVVKAYGLTEAEK
QEILKVHNDFRQKVAKGLETRGNPGPQPPAKNMNNLVWNDELANI
AQVWASQCNYGHDTCKDTEKYPVGQNIKRSTTAALFDSPGKLVK
MWENEVKDFNPNIWESKNNLKKTGHYTQMVWAKTKEIGCGSVKY
VKDEWYTHYLCNYGPSGNFRNEKLYEKK

Additional vespula sequences (NCBI entrez accession):

549193; 549192; 549191; 549190; 549189; 117414; 126761; 69576;
625255; 627189; 627188; 627187; 482382; 112561; 627186; 627185;

1923233; 897645; 897647; 745570; 225764; 162551.

Tree allergen sequences (mainly birch) sequences:

114922 Bet v 1 (SEQ ID NO: 87)

MGVFNYETETTSVIPAAARLFKAFILDGDNLFPAQAPQAISVENIEG
NGGPGTIKKISFPEGFPFKYVKDRVDEVDHTNFKYNYSVIEGGPIGD
TLEKISNEIKIVATPDGGSILKISNKYHTKGDHEVKAEQVKASKEMG
ETLLRAVESYLLAHSDAYN

21. On page 69, please replace all of the text on page 69 with the following text:

130975 Bet v 2 (SEQ ID NO: 88)

MSWQTYVDEHLMCDIDGQASNSLASAIVGHDGSVWAQSSSFPQFK
PQEITGIMKDFEEPGHLAPTGLHLGGIKYMVIQGEAGAVIRGKKGSG
GITIKKTGQALVFGIYEETVTPGQCNMVVERLGDYLDQGL

1168696 Bet v 3 (SEQ ID NO: 89)

MPCSTEAMEKAGHGHASTPRKRSLSNSSFRLRSESLNTRLRLRRIFDL
FDKNSDGIITVDELSRALNLLGLETDLSELESTVKSFTREGNIGLQFE
DFISLHQSLNDSYFAYGGEDEDDNEEDMRKSILSQEEADSFGGFKV
FDEDGDGYISARELQMVLGKLGFSSEGSEIDRVEKMIVSVDSNRDGR
VDFFEFKDMMRSVLRSS

809536 Bet v 4 (SEQ ID NO: 90)

MADDHPQDKAERERIFKRFDANGDGKISAAELGEALKTLGSITPDE
VKHMMAEIDTDGDGFISFQEFTDFGRANRGLLKDVAKIF

543675 Que a I (SEQ ID NO: 91)- Quercus alba=oak trees (fragment)

GVFTXESQETSVIAPAXLFLKALFL

543509 Car b I (SEQ ID NO: 92)- Carpinus betulus=hornbeam trees (fragment)

GVFNIEAETPSVIPAAARLFKSYVLDGDKLIPKVAPQAIXK

543491 Aln g I (SEQ ID NO: 93)- *Alnus glutinosa*=alder trees (fragment)

GVFNIEAETPSVIPAAARLFKAFILDGDKLLPKVAPEAVSSVENI

1204056 Rubisco (SEQ ID NO: 94)

VQCMQVWPPLGLKKFETLSYLPPLSSEQLAKEVDYLLRKNLIPCLE

FELEHGFVYREHNRSPGYDGRYWTMWKLPFMFGCNDSSQVLKEL

EECKKAYPSAFIRIIGFDDK

22. On page 70, please replace all of the text on page 70 with the following text:

Additional tree allergen sequences (NCBI entrez accession number):

131919; 128193; 585564; 1942360; 2554672; 2392209; 2414158;
1321728; 1321726; 1321724; 1321722; 1321720; 1321718; 1321716;
1321714; 1321712; 3015520; 2935416; 464576; 1705843; 1168701;
1168710; 1168709; 1168708; 1168707; 1168706; 1168705; 1168704;
1168703; 1168702; 1842188; 2564228; 2564226; 2564224; 2564222;
2564220; 2051993; 1813891; 1536889; 534910; 534900; 534898;
1340000; 1339998; 2149808; 66207; 2129477; 1076249; 1076247;
629480; 481805; 81443; 1361968; 1361967; 1361966; 1361965;
1361964; 1361963; 1361962; 1361961; 1361960; 1361959; 320546;
629483 ; 629482; 629481; 541804; 320545; 81444; 541814.; 629484;
474911; 452742; 1834387; 298737; 298736; 1584322; 1584321; 584320;
1542873; 1542871; 1542869; 1542867; 1542865; 1542863; 1542861;
1542859; 1542857; 1483232; 1483230; 1483228; 558561; 551640;
488605; 452746; 452744; 452740; 452738; 452736; 452734; 452732;
452730; 452728; 450885; 17938; 17927; 17925; 17921; 297538; 510951;
289331; 289329; 166953 .

Peanut

Peanut sequences

1168391 Ara h 1 (SEQ ID NO: 95)

MRGRVSPLMLLLGILVLASVSATHAKSSPYQKKTENPCAQRCLQSC
QQEPDDLKQKACESRCKLEYDPRCVYDPRGHTGTTNQRSPGER
TRGRQPGDYDDRRQPRREEGGRWGPAGPREREREEDWRQPRE
WRRPSHQQRKIRPEGREGEQEWGTPGSHVREETSRRNNPFYFPSRR
FSTRYGNQNGRIRVLQRFQDQRSRQFQNLQNHRIQIEAKPNTLVLP
KHADADNILVIQQGQATVTVANGNNRKSFNLDGHALRIPSGFISYI
LNRHDNQNLRVAKISMPVNTPGQFEDFFPASSRDQSSYLQGFSRNT

23. On page 71, please replace all of the text on page 71 with the following text:

LEAAFNAEFNEIRRVLLEENAGGEQEERGQRRWSTRSSENNEGVIV
KVSKEHVEELTKHAKSVSKKGSEEEGDITNPINLREGEPDLSNNFGK
LFEVKPDKKNPQLQDLDMMLTCVEIKEGALMLPHFNSKAMVIVVV
NKG TG NLELVAVRKEQQQRGRREEEEDEDEEEEGSNREVRRTAR
LKEGDVFIMPAAHPVAINASSELHLLGFGINAENNRIFLAGDKDN
VIDQIEKQAKDLAFPGSGEQVEKLIKQKESHFVSARPQSQSQSPSSP
EKESPEKEDQEEENQGGKGPLLSILKAFN

Ragweed

Ambrosia sequences

113478 Amb a 1 (SEQ ID NO: 96)

MGIKHCCYILYFTLALVTLLQPVRSAEDLQQILPSANETRSLTTCGT
YNIIDGCWRGKADWAENRKALADCAQGFAKGTIGGKDGDYTVTS
ELDDDVANPKEGTLRFGAAQNRPLWIIFARMDVIRLDRELAINNDK
TIDGRGAKVEIINAGFAIYNVKNIIHNIIIMHDIVVNPGLIKSHDGPP
VPRKGS DGAIGISGGSQIWIDHCSLSKAVDGLIDAKHGSTHFTVSN

CLFTQHQYLLLFWD FDERGMLCTVAFNKFTDNVDQRMPNLRHGF
VQVVNNNYERWGSYALGGSAGPTILSQGNRFLASDIKKEVVGRYG
ESAMSESINWNWRSYMDVFENGAI FVPSGVDPVLTPEQNAGMIPAE
PGEAVLRLTSSAGVLSCQPGAPC

113479 Amb a 2 (SEQ ID NO: 97)

MGIKHCCYILYFTLALVTLVQAGRLGEEVDILPSPNDTRRSLQGCE
AHNIIDKCWRCKPDWAENRQALGNCAQGFGKATHGGKWGDIYM
VTSDQDDDDVNPKEGTLRFGATQDRPLWIFFQRDMIIYLQQEMVVT
SDKTIDGRGAKVELVYGGITLMNVKNVHHNIDIHDVRVLPGGRIKS
NGGPAIPRHQSDGDAIHVTGSSDIWIDHCTLSSKSF DGLVDVNWGST
GVTISNCKFTHHEKAVLLGASDTHFQDLKMHVTLAYNIFTNTVHE

24. On page 72, please replace all of the text on page 72 with the following text:

RMPRCRFGFFQIVNNFYDRWDKYAIGGSSNPTILSQGNKFVAPDFIY
KKNVCLRTGAQEPEWMTWNWRTQNDVLENGAIFVASGSDPVLTA
EQNAGMMQAEPGDMVPQLTMNAGVLTCSPGAPC

113477 Amb a 1.3 (SEQ ID NO: 98)

MGIKQCCYILYFTLALVALLQPVRSAEGVGEILPSVNETRSLQACEA
LNIIDKCWRGKADWENNRQALADCAQGFAKGT YGGKWGDVYTV
TSNLDDDDVANPKEGTLRFAAAQNRPLWIFFKNDMVINLNQELVVN
SDKTIDGRGVKVEIINGGLTLMNVKNIIHHNINIHDVKVLPGGMIKSN
DGPPILRQASDGDTINVAGSSQIWIDHCSLSKSF DGLVDVTLGSTHV
TISNCKFTQQSKAILLGADDTHVQDKGMLATVAFNMFTDNVDQR
MPPRCRFGFFQVVNNNYDRWGTYAIGGSSAPTILCQGNRFLAPDDQI
KKNVLARTGTGAAESMAWNWRSKDLLENGAIFVTSGSDPVLTPV
QSAGMIPAEPGEAAIKLTSSAGVFSCHPGAPC

113476 Amb a 1.2 (SEQ ID NO: 99)

MGIKHCCYILYFTLALVTLLQPVRSAEDVEEFLPSANETRRLKACE
AHNIIDKCWRCKADWANNRQALADCAQGFAKGTGGKHGDVYT
VTSDKDDDVANPKEGTLRFAAAQNRPLWIFKRNMMVIHLNQELVV
NSDKTIDGRGVKVNIVNAGLTLMNVKNIIHNINIHDIKVCPPGMIKS
NDGPPILRQQSDGDAINVAGSSQIWIDHCSLSKASDGLLDITLGSSHV
TVSNCKFTQHGFVLLLGADDTHYQDKGMLATVAFNMFTDHVDQR
MPRCRFGFFQVVNNNYDRWGTYAIGGSSAPTILSQGNRFFAPDDIHK
KNVLARTGTGNAESMSWNWRTDRDLENGAIFLPSGSDPVLTPAQ
KAGMIPAEPGEAVLRLTSSAGVLSCHQAGAPC

113475 Amb a 1.1 (SEQ ID NO: 100)

MGIKHCCYILYFTLALVTLLQPVRSAEDLQELPVNETRRLTTSGAY
NIIDGCWRGKADWAENRKALADCAQGFQGTGGKDGDIYTVTS
ELDDDVANPKEGTLRFGAAQNRPLWIFERDMVIRLDKEMVVNSD

25. On page 73, please replace all of the text on page 73 with the following text:

KTIDGRGAKVEIINAGFTLNGVKNVHHNINMHDVKVNPGLIKSND
GPAAPRAGSDGDAISISGSSQIWIDHCSLSKSVDGLVDAKLGTTTTLT
VSNSLFTQHGFVLLFGAGDENIEDRGMLATVAFNTFTDNVDQRMP
RCRHGFFQVVNNNYDKWGSYAIGGSASPTILSQGNRFCAPDERSKK
NVLGRHGEAAAESMKWNWRTNKDVLNGAIFVASGVDPVLTPAQ
SAGMIPAEPGESALSLTSSAGVLSCHQAGAPC

Cedar sequences

493634 Cry j IB precursor (SEQ ID NO: 101)

MDSPCLVALLVFSFVIGSCFSDNPIDSCWRGDSNWAQNRMKLADC
AVGFGSSTMGGKGGDLYTVTNSDDDPVNPPGTLRYGATRDRPLWI

IFSGNMNIKLKMPMYIAGYKTFDGRGAQVYIGNGGPCVFIKRVS
NIHGLYLYGCSTSVLGNVLINESFGVEPVHPQDGDALTLRTATNIWI
DHNSFSNSSDGLVDVTLTSTGVTISNNLFFNHHKVMSLGHDDAYS
DKSMKVTVAFNQFGPNCGQRMPRARYGLVHVANNYDPWTIYAI
GGSSNPTILSEGENSFTAPNESYKKQVTIRIGCKTSSSCSNWVWQSTQ
DVFYNGAYFVSSGKYEGGNIYTKKEAFNVENGNAATPHLTQNAGVL
TCSLSKRC

493632 Cry j IA precursor (SEQ ID NO: 102)

MDSPCLVALLVLSFVIGSCFSDNPIDSCWRGDSNWAQNRMKLADC
AVGFGSSTMGGKGGDLYTVTNSDDDPVNPAPGTLRYGATRDRPL
WIIIFSGNMNIKLKMPMYIAGYKTFDGRGAQVYIGNGGPCVFIKRVS
NVIIHGLHLYGCSTSVLGNVLINESFGVEPVHPQDGDALTLRTATNI
WIDHNSFSNSSDGLVDVTLSSSTGVTISNNLFFNHHKVMLLGHDDAY
SDDKSMKVTVAFNQFGPNCGQRMPRARYGLVHVANNYDPWTIY
AIGGSSNPTILSEGENSFTAPNESYKKQVTIRIGCKTSSSCSNWVWQST
QDVFYNGAYFVSSGKYEGGNIYTKKEAFNVENGNAATPQLTKNAGV
LTCSLSKRC

26. On page 74, please replace all of the text on page 74 with the following text:

1076242 Cry j II precursor - Japanese cedar (SEQ ID NO: 103)

MAMKLIAPMAFLAMQLIIMAAAEDQSAQIMLDSVVEKYLRNRS
RKVEHSRHDAINIFNVEKYGAVGDGKHDCTEAFSTAWQAACKNPS
AMLLVPGSKKFVVNNLFFNGPCQPHFTFKVDGIIAAYQNPASWKN
NRIWLQFAKL TGFTLMGKGVIDGQKQWWAGQCKWVNGREICND
RDRPTAIKFDFSTGLIIQGLKLMNSPEFHLVFGNCEGVKIIGISITAPR
DSPNTDGIDIFASKNFHLQKNTIGTGDDCVAIGTGSSNIVIEDLICGP

GHGISIGSLGRENSRAEVS YVHVNGAKFIDTQNGRLRIKTWQGGSGM
ASHIIYENVEMINSENPI LINQFYCT SASACQNQRS AVQIQDV TYKNI
RGTSATAAAIQLKCSDSM PCKDIKLS DISLKL TSGKIASCLNDNANG
YFSGHVIPACKNLSPSAKR KESKSHKHPKTVMVENM RAYDKGNRT
RILGSRPPNCTNKCHGCSPCKAKLVIVHRIMPQEYYPQRWICSCHG
KIYHP

1076241 Cry j II protein - Japanese cedar (SEQ ID NO: 104)

MAMKFIAPMAFVAMQLIIMAAAEDQSAQIMLDS DIEQYLR SNRSLR
KVEHSRHDAINIFNVEKYGA VGDGKH DCTEAFSTAWQAACKKPSA
MLLVPGNKKFVVNNLFFNGPCQPHFTFKVDGIIAAYQNPASWKNN
RIWLQFAKLTGFTLMGKGVIDGQ GKQWWAGQCKWVNGREICNDR
DRPTAIKFDFSTGLIIQGLKLMNSPEFHLVFGNCEGVKIIGISITAPRD
SPNTDGIDIFASKNFHLQKNTIGTGDDCVAIGTGSSNIVIEDLICGPG
HGISIGSLGRENSRAEVS YVHVNGAKFIDTQNGRLRIKTWQGGSGMA
SHIIYENVEMINSENPI LINQFYCT SASACQNQRS AVQIQDV TYKNIR
GTSATAAAIQLKCSDSM PCKDIKLS DISLKL TSGKIASCLNDNANGY
FSGHVIPACKNLSPSAKR KESKSHKHPKTVMVKNMGAYDKGNRTRI
LLGSRPPNCTNKCHGCSPCKAKLVIVHRIMPQEYYPQRWMCSRHG
KIYHP

541803 Cry j I precursor - Japanese cedar (SEQ ID NO: 105)

27. On page 75, please replace all of the text on page 75 with the following text:

MDSPCLVALLVLSFVIGSCFSDNPIDSCWRGDSNWAQNRMKLADC
AVGFGSSTMGGKGGDLYTVTNSDDDPVNPPGT LRYGATRDRPLWI
IFSGNMNIKLKMPMYIAGYKTFDGRGAQVYIGNGGPCVFIKRVSNV
IIHGLHLYGCSTSVLGNVLINESFGVEPVHPQDGDALTLRTATNIWI

DHNSFSNSSDGLVDVTLSSSTGVTISNNLFFNHHKVMLLGHDDAYS
DKSMKVTVAFNQFGPNCGQRMPRARYGLVHVANNNYDPWTIYAI
GGSSNPTILSEGENSFTAPNESYKKQVTIRIGCKTSSSCSNWVWQSTQ
DVFYNGAYFVSSGKYEGGNIYTKKEAFNVENGNA TPQLTKNAGVL
TCSLSKRC

541802 Cry j I precursor- Japanese cedar (SEQ ID NO: 106)

MDSPCLVALLVFSFVIGSCFSDNPIDSCWRGDSNWAQNRMKLADC
AVGFGSSTMGGKGGDLTYVTNSDDDPVNPAPGTLRYGATRDRPL
WIIFSGNMNIKLKMPMYIAGYKTFDGRGAQVYIGNGGPCVFIKRV
NVIIHGLYLYGCSTSVLGNVLINESFGVEPVHPQDGDALTLRTATNI
WIDHNSFSNSSDGLVDVTLTSTGVTISNNLFFNHHKVMSLGHDDAY
SDDKSMKVTVAFNQFGPNCGQRMPRARYGLVHVANNNYDPWTIY
AIGGSSNPTILSEGENSFTAPNESYKKQVTIRIGCKTSSSCSNWVWQST
QDVFYNGAYFVSSGKYEGGNIYTKKEAFNVENGNA TPHLTQNAGV

LTCSLSKRC

Dog

Canis sequences:

Can f 1 (SEQ ID NO: 107)

MKTLLL TIGFSLIAILQAQDTPALGKDTVAVSGKWYLKAMTADQE
VPEKPDSVTPMILKAQKGGNLEAKITMLTNGQCQNITVVLHKTSEP
GKYTAYEGQRVVFIQPSVVRDHYILYCEGELHGRQIRMAKLLGRDP
EQSQEALEDFREFSRAKGLNQEILELAQSETCSPGGQ

28. On page 76, please replace all of the text on page 76 with the following text:

Serum albumin fragment (SEQ ID NO: 108)

EAYKSEIAHRYNDLGEEHFRGLVL

Serum albumin fragment (SEQ ID NO: 109)

LSSAKERFKCASLQKFGDRAFKAWSVARLSQRFPKADFAEISKVVT
DLTKVHKECCHGDLLECADDRADLAKYMCENQDSISTKLKECCDK
PVLEKSQCLAEVERDELPGDLPSLAADFVEDKEVCKNYQEAKDVF
LGTFLYEYSRRHPEYSVSLLLRLAKEYEATLEKCCATDDPPTCYAK
VLDEFKPLVDEPQNLVKTNCELFEKLGEYGFQNALLVRYTKKAPQ
VSTPTLVVEVSRKLGKVGTKCCKKPESERMSCADDFLS

Can f 2 (SEQ ID NO: 110)

MQLLLLTVGLALICGLQAQEGNHEEPQGGLEELSGRWHSVALASN
KSDLIKPWGHFRVFIHMSAKDGNLHGDILIPQDGQCEKVS LTAFKT
ATSNKFDLEYWGHNDLYLAEVDPKSYLILYMINQYNDDTSLVAHL
MVRDL SRQQDFLP AFESVCEDIGLHKDQIVVLSDDDR CQGSRD

Additional dog allergen protein (NCBI entrez accession):

1731859

Horse

Equus sequences:

1575778 Equ c1 (SEQ ID NO: 111)

MKLLLLLCLGLILVCAQQEENS DV AIRNFDISKISGEWYSIFLASDVK
EKIEENGSMRVFVDVIRALDNSSLYAEYQTKVNGECTEFPMVFDKT
EEDGVYSLNYDGYNVFRISEFENDEHIILYLVNFDKDRPFQLFEFYA
REPDVSPEIKEEFVKIVQKRGIVKENIIDLT KIDRCFQLRGNGVAQA

29. On page 77, please replace all of the text on page 77 with the following text:

3121755 Equ c 2 (SEQ ID NO: 112)

SQXPQSETDYSQLSGEWNTIYGAASNIXK

Euroglyphus (mite)

Euroglyphus sequences:

Eur m 1 (variant) (SEQ ID NO: 113)

TYACSINSVSLPSELRLSLRTVTPIRMQGGCGSCWAFSGVASTESA
YLAYRNMSLDLAEQELVDCASQNGCHGDTIPRGIEYIQQNGVVQE
HYYPYVAREQSCHRPNAQRYGLKNYCQISPPDSNKIRQALTQTHTA
VAVIIGIKDLNAFRHYDGRTIMQHDNGYQPNYHAVNIVGYGNTQG
VDYWIVRNSWDTTWGDNGYGYFAANINL

Eur m 1 (variant) (SEQ ID NO: 114)

TYACSINSVSLPSELRLSLRTVTPIRMQGGCGSCWAFSGVASTESA
YLAYRNMSLDLAEQELVDCASQNGCHGDTIPRGIEYIQQNGVVQE
HYYPYVAREQSCHRPNAQRYGLKNYCQISPPDSNKIRQALTQTHTA
VAVIIGIKDLNAFRHYDGRTIMQHDNGYQPNYHAVNIVGYGNTQG
VDYWIVRNSWDTTWGDNGYGYFAANINL

Eur m 1 (variant) (SEQ ID NO: 115).

ETNACSINGNAPAEIDLRQMRTVTPIRMQGGCGSCWAFSGVAATES
AYLAYRNQSLDLAEQELVDCASQHGCHGDTIPRGIEYIQHNGVVQE
SYYRYVAREQSCRRPNAQRFGISNYCQIYPPNANKIREALAQTTHSAI
AVIIGIKDLDAFRHYDGRTIIQRDNGYQPNYHAVNIVGYSNAQGVD
YWIVRNSWDTNWGDNGYGYFAANIDL

Eur m 1 (variant) (SEQ ID NO: 116)

ETSACRINSVNPSELRLSLRTVTPIRMQGGCGSCWAFSGVAATES

30. On page 78, please replace all of the text on page 78 with the following text:

AYLAYRNTSLDLSEQELVDCASQHGCHGDTIPRGIEYIQQNGVVEE
RSYPYVAREQQCRRPNSQHYGISNYCQIYPPDVKQIREALTQTHTAI

AVIIGIKDLRAFQHYDGRTHQHDNGYQPNYHAVNIVGYGSTQGVD
YWIVRNSWDTTWGDSGYGYFQAGNNL

Poa (grass) sequences

113562 POLLEN ALLERGEN POA P 9 (SEQ ID NO: 117)

MAVQKYTVLFLVALVVGPAASYAADLSYGAPATPAAPAAGYTP
AAPAGAAPKATTDEQKMIEKINVGFKAAVAAAGGVPAANKYKTFV
ATFGAASNKAFAEALSTEPKGAAVDSSKAALTSKLDAAAYKLAYKS
AEGATPEAKYDDYVATLSEALRIIAGTLEVHGVKPAAEEVKATPAG
ELQVIDKVDAAFKVAATAANAAPANDKFTVFEEAFNDAIKASTGG
AYQSYKFIPALEAAVKQSYAATVATAPAVKYTVFETALKKAITAMS
QAQKAAKPAAAATGTATAAVGAATGAATAAAGGYKV

113561 POA P 9 (SEQ ID NO: 118)

MAVHQYTVALFLAVALVAGPAASYAADVGYGAPATLATPATPAA
PAAGYTPAAPAGAAPKATTDEQKLIEKINAGFKAAVAAAAGVPAV
DKYKTFVATFGTASNKAFAEALSTEPKGAAAASSNAVLTSKLDAA
YKLAYKSAEGATPEAKYDAYVATLSEALRIIAGTLEVHAVKPAGEE
VKAIPAGELQVIDKVDAAFKVAATAANAAPANDKFTVFEEAFNDA
IKASTGGAYQSYKFIPALEAAVKQSYAATVATAPAVKYTVFETALK
KAITAMSQAQKAAKPAAAVTATATGAVGAATGAVGAATGAATAA
AGGYKTGAATPTAGGYKV

113560 POA P 9 (SEQ ID NO: 119)

MDKANGAYKTALKAAASAVAPAEKFPVFQATFDKNLKEGLSGPDA
VGFAKKLDAFIQTSYLSSTKAAEPKEKFDLFLVSLTEVLRFMAGAVK
APPASKFPAKPAPKVAAAYTPAAPAGAAPKATTDEQKLIEKINVGFK

31. On page 79, please replace all of the text on page 79 with the following text:

AAVAAAAGVPAASKYKTFVATFGAASNKAFAEALSTEPKGAAVAS
SKAVLTSKLDAAAYKLAYKSAEGATPEAKYDAYVATLSEALRIIAGT
LEVHGVKPAAEVKAIPAGELQVIDKVDAAFKVAATAANAAPAND
KFTVFEEAFNDAIKASTGGAYQSYKFIPALEAAVKQSYAATVATAP
AVKYTVFETALKKAITAMSQAQKAAKPAAAVTGTATSAVGAATGA
ATAAAGGYKV

Cockroach sequences

2833325 Cr p1 (SEQ ID NO: 120)

MKTALVFAAVVAFVAARFPDHKDYKQLADKQFLAKQRDVLRLFH
RVHQHNILNDQVEVGIPMTSKQTSATTVPPSGEAVHGVQLQEGHARP
RGEFFSVNYEKHREQAIMLYDLLYFANDYDTFYKTACWARDRVN
EGMFMYSFSIAVFHRDDMQGVMLPPPYEVYPYLFVDHDDVIHMAQ
KYWMKNAGSGEHHSHVIPVNFTLRTQDHLLAYFTSDVNLNAFNTY
YRYYYPSWYNTTLYGHNIDRRGEQFYITYKQIYARYFLERLSNDLP
DVYPPFYYSKPVKSAYNPNLRYHNGEEMPVRPSNMYVTNFDLYYIA
DIKNYEKRVEDAIDFGYAFDEHMKPHSLYHDVHGMEYLADMIEG
NMDSPNFYFYGSIYHMYHSMIGHIVDPYHKMGLAPSLEHPETVLR
DPVIFYQLWKRVDHLFQKYKNRLPRYTHDELAFEGVKVENVDVGK
LYTYFEQYDMSLDMAVYVNNVDQISNVDVQLAVRLNHPFTYNIE
VSSDKAQDVYVAVFLGPKYDYLGREYDLNDRRHVFVEMDRFPYH
VGAGKTVIERNSHDSNIIAPERDSYRTFYKKVQEAYEGKSQYYVDK
GHNYCGYPENLLIPKGKKGGQAYTFYVIVTPYVKQDEHDFEPYNY
KAFSYCGVGSEKYPDNKPLGYPFDRKIYSNDFYTPNMYFKDVIIF
HKKYDEVGVQGH

2231297 Cr p2 (SEQ ID NO: 121)

INEIHSIIGLPPFVPPSRRHARRGVGINGLIDDVIAILPVDELKALFQE
KLETSPDFKALYDAIRSPEFQSIISTLNAMQRSEHHQNLRDKGVDVD

32. On page 80, please replace all of the text on page 80 with the following text:

HFIQLIRALFGLSRAARNLQDDLNDLFLHSLEPISPRHRHGLPRQRRR
SARVSAYLHADDFHKIITTIEALPEFANFYNFLKEHGLDVVDYINEI
HSIIGLPPFVPPSRRHARRGVGINGLIDDVIAILPVDELKALFQEKLET
SPDFKALYDAIRSPEFQSIISTLNAMPEYQELLQNLRDKGVDVDHFI
RVDQGTLRRTLSSGQRNLQDDLNDLFLALPTDQILAIAMDYLANDAE
VQELVAYLQSDDFHKIITTIEALPEFANFYNFLKEHGLDVVDYINEI
HSIIGLPPFVPPSQRHARRGVGINGLIDDVIAILPVDELKALFQEKLET
SPDFKALYDAIDLRSSRA

1703445 Bla g 2 (SEQ ID NO: 122)

MIGLKLVTVLFAVATITHAAELQRVPLYKLVHVFINTQYAGITKIGN
QNFLTVDSTSCNVVVASQECVGGACVCPNLQKYEKLKPKYISDG
NVQVKFFDTGSAVGRGIEDSLTISNLTTSQQDIVLADELSQEVCILSA
DVVVGIAAPGCPNALKGKTVLENFVEENLIAPVFSIHHARFQDGEH
FGEIIFGGSDWKYVDGEFTYVPLVGDDSWKFRLDGVKIGDTTVAPA
GTQAIIDTSKAIIVGPKAYVNPINEAIGCVVEKTTTRICKLDCSKIPS
LPDVTFVINGRNFNISSQYYIQQNGNLCYSGFQPCGHSDHFFIGDFF
VDHYYSEFNWENKTMGFGRSVE

SV

1705483 Bla g 4 (SEQ ID NO: 123)

AVLALCATDTLANEDCFRHESLVPNLDYERFRGSWIIAAGTSEALT
QYKCWIDRFSYDDALVSKYTDSQGKNRTTIRGRTKFEGNKFTIDYN
DKGKAFSAPYSVLATDYENYAIVEGCPAAANGHVIVVQIRFSVRRF

HPKLGDKEMIQHYTLDQVNQHKKAEEDLKHFNLKYEDLHSTCH

2326190 Bla g 5 (SEQ ID NO: 124)

YKLTYPVKALGEPFLLSYGEKDFEDYRFQEGDWPNLKPSMPFG

KTPVLEIDGKQTHQSVAISRYLGKQFGLSGKDDWENLEIDMIVDTIS

DFRAAIAANYHYDADENSKQKKWDPLKKETIPYYTKKFDEVVKANG